

What Makes Teachers Reflect to Improve Their Practice?

Reflective Practice in a Social-Organizational Context

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Abstract

Although the value of teacher research to both the teachers and to the education community has been extensively reported in recent literature, it is only practiced by small pockets of teachers across the country. Viewing the problem through a social organizational lens suggests that the lack of widespread involvement in teacher research may be due in part to the social interactions and organizational structures in place in schools. An online survey was used to collect data from 84 preK-12 educators who had conducted teacher research and 15 who had not regarding a range of social organizational factors in their schools, including school culture and the time and materials available for research activities. Responses indicate that significant changes in administrative leadership and formal as well as informal support systems must be in place to support the practice of teacher research. A positive school culture alone is not enough impetus to engage in the classroom inquiry process; there must also be explicit support for the process voiced by instructional leaders. Information about the teacher research process and support for those who are interested in beginning and continuing this reflective practice must also be available. The challenge to school leaders is to embrace the concept of formalized reflective practice and embed the concept into the current professional development models in their schools; with these supports in place, teacher research may become a higher-profile method of reflective practice and school improvement.

Introduction

Teacher research is a process in which educators determine research “problems” in the context of their schools and classrooms, propose investigative methods appropriate to the problems, systematically observe the results, analyze those results in light of their professional knowledge, and share the results with others while at the same time enacting change in their classrooms (Bissex & Bullock, 1987; Cochran-Smith & Lytle, 1999; Goswami & Stillman, 1987; Kincheloe, 2003; Loughran, 2002; Mohr & MacLean, 1999; Myers, 1985). Perhaps the best argument for supporting teacher research was presented by Frederick Erickson in the 1986 *Handbook of Research on Teaching*:

If classroom teaching in elementary and secondary schools is to come of age as a profession—if the role of teacher is not to continue to be institutionally infantilized—then teachers need to take the adult responsibility of investigating their own practice systematically and critically, by methods that are appropriate to their practice (Erickson, 1986).

Although the value of teacher research to both the teachers and to the education community has been extensively reported in recent literature (Davis & Resta, 2002; Demetrian, 2000; Goldston & Shroyer, 2000; Gray & Sterling, 2000; Kincheloe, 2003; Loughran, 2002; McCown & Moss, 2002; Mitchell, 2002; Quigley, 2001; Raphael et al., 2001; Zeichner & Noffke, 2001), it is only practiced by small pockets of teachers across the country. Viewing the problem through a social organizational lens suggests that the lack of widespread use of the teacher research model may be due in part to the social interactions and organizational structures in place in schools (Rosenholtz, 1989).

The professional culture of a school impacts how teachers perceive classroom inquiry (McDonald & Elias, 1983). Teachers in school cultures more supportive of teacher research would be expected to be more involved in classroom research. Colleagues and administrators must understand the teacher research process and need for resources for teachers to conduct and complete research (McCown & Moss, 2002). A negative response from coworkers can not only make the work more difficult but the absence of moral and intellectual support from other teachers can prevent the process altogether (Bonk, Ehman, Hixon, & Yamagata-Lynch, 2002; Dana, 1995; Feldman, 1998; Goswami & Stillman, 1987; Myers, 1985; Raphael et al., 2001). In addition to support, teacher research requires time; schools generally do not, however, provide this time and research is rarely embedded into daily practice (Borgia & Schuler, 1996; Buttery, 1995; Cochran-Smith & Lytle, 1993; Drennon, 1994; Myers, 1985). Tools such as tape recorders, Internet for searches and email to locate information and discuss ideas with others, are necessary for the conduct of research (Bissex & Bullock, 1987; Cochran-Smith & Lytle, 1993; Davis & Resta, 2002; Lytle, 1996; Mohr & MacLean, 1999), however may be lacking in many schools.

Purpose of the Study

This research is part of Stage 2 of a larger study intended to determine whether the apparent low incidence of teacher research among preK-12 educators is due in part to social organizational factors (Croasdaile, 2005).

The 2001 *Handbook of Research on Teaching* includes a call for further inquiry into the conditions that might

facilitate and obstruct the ability of educators to conduct research on their own practice, such as questions about the importance of research groups and external facilitators to the research process, and of ways in which to lessen the inevitable tensions between teaching and researching (Zeichner & Noffke, 2001).

Research into these conditions can be used to inform stakeholders who influence decisions regarding the conditions and structures of schools; such research also contributes to the pool of knowledge about how to foster teacher research in modern schools.

This research looks at two groups of educators: those who have conducted teacher research to some extent ($n=84$) and those who have not ($n=15$). The two groups' perceptions of the social-organizational factors present in their schools are compared to determine whether significant differences exist between the environments of those who have and have not participated in classroom research.

Sample

Teacher researchers are a group that is difficult to locate. To find a sample of educators that would include this population, two groups were targeted. In Stage 1 of the study, I contacted 100 authors of teacher research studies published between 2002 and 2004 and members of six regional sites of the National Writing Project, a professional organization known to support teacher research. This selection process would ensure that information was gathered from individuals who had, in fact, participated in teacher research. A total of 151 contacts were made in these two groups.

To select a sample for Stage 2 of the study, I randomly selected 80 Virginia school divisions and then randomly selected one school from within each selected division. One teacher was randomly selected from the faculty email lists available online for the selected school. Four schools did not have email lists available online, resulting in a total of 76 contacts made for this group. This selection process was intended to gather information from individuals who may or may not have participated in teacher research.

Data Collection

The Survey on Teacher Research, an online survey, was used for both stages of the study. The development and testing of this instrument is discussed in detail in a previous report (Croasdaile, 2005). The survey includes measures of school culture, colleague knowledge of and value for teacher research, colleague response to teacher research, access to material resources, available time, moral and intellectual support, and level of involvement in teacher research as well as items related to teacher research group membership.

An online survey was selected as email addresses are obtainable for this sample and it is likely that respondents had the knowledge and ability to respond to this survey method (Truell & Goss, 2002). This web-based survey was deployed by a URL-embedded message in the text of an email that directed the recipient to click on this hypertext link, which then evoked his or her Web browser, presenting the recipient with an online survey. Respondents in Stage 1 received a series of four personalized contacts over a three-week period; those in Stage 2 received three personalized contacts over three weeks.

Survey dissemination varied depending on the respondent group; three Writing Project sites had contact with the researcher through listservs and individual correspondence, while the other Writing Project sites submitted lists of teachers' email addresses and the four-contact survey dissemination method was followed. Contacts included a personalized invitation to participate in the survey, two follow-up contacts and a final invitation to participate with a deadline date included. Email contacts described the purpose of the research, provided the researcher's contact data for further information, and contained a hyperlink connecting to a webpage of FAQs (frequently asked questions) located on a university-sponsored webpage. Follow-ups served as both a thank you to those who responded and a reminder to those who did not. All "bounced" emails resulting from over-quota email accounts were re-sent so that subsequent emails could be accepted (Sills & Song, 2002).

In Stage 1, survey responses were downloaded from a secure survey administration server to an SPSS database. Confidentiality was ensured by replacing all potentially identifying information with an identification number after eliminating incomplete submissions. Stage 2 responses were completely anonymous, with no identification system used.

Response Rate

In Stage 1, a total of 151 personalized email addresses were identified; 12 were found to be undeliverable addresses and messages to two addresses were returned due to being categorized as "junk mail" by a commercial spam blocker. One recipient declined to take the survey due to her current position at the university rather than the preK-12 level. Messages are therefore assumed to have reached 136 potential respondents; 83 complete surveys were received between December 12, 2004 and January 12, 2005, for a response rate of 61%. This response rate appears to be strong, possibly due to participants' intrinsic interest in a subject that they see as important.

In Stage 2, a total of 76 personalized email addresses were identified; 7 were found to be undeliverable addresses. One recipient declined to take the survey, stating that her research was “not yet at the level” at which she wished to report it; this is recognized as an issue to address when preparing the next survey. Messages are therefore assumed to have reached 69 potential respondents; 18 complete surveys were received between March 6, 2007 and April 1, 2008, for a response rate of 26%. This response rate appears to be low, possibly due to a lack of participant interest in a subject that they may not see as applicable to their lives. The random selection method, when used with email, also risks identification of individuals who do not use their school email accounts, and therefore the invitations to complete the survey did not actually reach them.

Analysis

School Culture

The professional culture of a school can greatly impact the way a teacher perceives and responds to teacher research. The School Culture Scale was based on the findings of McCown and Moss (2002), who noted that schools that reward hard work, ongoing learning, and teachers’ critical reflection on their practice tend to be more supportive of teacher research, while schools that tolerate minimal effort and heavy reliance on existing materials and curriculum tend to be less supportive. The School Culture Scale is composed of three positively-stated items and the reverse of three negatively-stated items. Higher scores on this scale indicate a school culture that is more supportive of teacher research.

The mean *school culture* scale scores were 2.08 ($SD=4.85$) for teacher researchers and 5.93 ($SD=4.01$) for teachers who did not report research activities. The school culture scores of teacher researchers and non-researchers were compared using an independent samples *t*-test. There was a significant difference between the school culture scores of the two groups, $t_{(97)}=2.90$, $p<.01$, two-tailed. Calculating Cohen’s *d* indicates a moderate effect size of .81. This group of non-researchers, therefore, appears to perceive a markedly more positive school culture in their workplaces than did the teacher researchers.

Time Available

Teacher research requires time for planning, analysis, and writing. The mean *time available* scale scores were 2.41 ($SD=1.65$) for teacher researchers and 2.27 ($SD=1.67$) for teachers who did not report research activities. The school culture scores of teacher researchers

and non-researchers were compared using an independent samples *t*-test. There was no significant difference between the time available scores of the two groups, $t_{(97)}=2.98$, $p=.77$, two-tailed. 40 teacher researchers and 4 who had not participated in research made comments regarding the importance of having time set aside for teacher research. Most simply wrote “time” but some indicated the important role that time to collaborate with colleagues plays in sustaining teacher research.

Table 1. Selected Responses Related to Time Available

<p>“Most teachers don't think that they have time to do research.”</p> <p>“Teachers need time to work with other teachers to reflect more on the research that they are focusing on. School days are hectic and pass quickly.”</p> <p>“More time for discussion with colleagues.”</p> <p>“More professional leave time to meet with other professionals.”</p> <p>“[It is important] that schools support the development of school-based teacher research teams or communities (including release time for team meetings--possibly in lieu of in-service days that too often take the form of ‘sit and get’).”</p> <p>“Money for days off to organize data, write drafts and final copies, work with others to edit papers and help resolve 'research question' problems, time to attend conferences that relate to research question to gather more info and to share my research.”</p>
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Access to Material Resources

Teacher research, like that conducted by academics in university or other institutional settings, often requires that certain resources be readily available. Lack of access to these items may prohibit a teacher’s engagement in classroom research. Teachers who conduct research need access to the computers, audio recorders, copiers, and other devices often required in research. Higher scores on the Material Resources Scale indicate greater access to the material resources required for teacher research.

The mean *access to materials* scale scores were 5.35 ($SD=1.69$) for teacher researchers and 6.53 ($SD=.74$) for teachers who did not report research activities. The access to materials scores of teacher researchers and non-researchers were compared using an independent samples *t*-test. There was a significant difference between the access to materials scores of the two groups, $t_{(97)}=4.47$, $p<.001$, two-tailed. Calculating Cohen’s *d* indicates a moderate effect size of

.74. This group of non-researchers, therefore, reports noticeably greater access to the materials common to teacher research than did the teacher researchers.

School Supports

The mean *school support* scale scores were 1.10 ($SD=1.17$) for teacher researchers and 2.27 ($SD=1.03$) for teachers who did not report research activities. These supports include access to professional release time, teacher workdays, school-university partnership programs, and school- or district-based teacher research support groups. The school support scores of teacher researchers and non-researchers were compared using an independent samples *t*-test. There was a significant difference between the school support scores of the two groups, $t_{(97)}=3.64$, $p<.001$, two-tailed. Calculating Cohen's *d* indicates a moderate effect size of 1.02. This group of non-researchers perceives more support resources available in their workplaces than the teacher researcher respondents.

Teacher research groups can be a significant resource for teachers who otherwise have no school or colleague support (Lieberman & Grolnick, 1999; Mohr & MacLean, 1999). 31 teacher researchers and 2 who had not participated in research made comments regarding the importance of teachers having support in order to conduct classroom research. Over half ($n=19$) indicated that a teacher research group or professional learning community was a key to success.

Table 2. Selected Responses Related to School Support

“What is needed is a regular support group; a sense of a structured timeline including a deadline; someone else saying it is worth the effort; and a trusted colleague who will give honest feedback, listen and respond knowledgeably to the concepts, data, assumptions and conclusions.”

“The assistance of other faculty members is most valuable esp. as a sounding board. Other teachers have taken some of my ideas I researched and applied them to their lessons...then we discussed the similarities and differences, problems, etc. periods. Perhaps teacher research could take the place of the individual professional responsibilities [our county's] teachers are now assigned.”

“School and district support for release time and formation of a teacher-research team to collaborate and support the research.”

“Other educators to meet with, write with, talk with, read with, etc.”

“Voluntary small groups that can meet both face-to-face and online to review and support each others' efforts, to collaborate.”

“Within our district, we are beginning to use professional learning communities and allotting time in each teacher’s day to either have discourse with grade-level team mates or cross grade level vertical articulation. We need to provide time for teachers to analyze their practice, utilize one another as resources and make changes.”

“That schools support the development of school-based teacher research teams or communities.”

“More study groups to encourage action research in the school, with others that may be interested in the same topic. A support system to help finalize results and get it published.”

Administrative Support

33 teacher researchers and 1 who had not participated in research made comments regarding the importance of administrative support in making teacher research a more integral part of practice. Most simply wrote “administrative support” but others went further and indicated that both school-level and district-level administrators must give “implicit and explicit” support for teacher research for it to be a sustained activity.

Table 3. Selected Responses Related to Administrative Support

“I sometimes think that if I had given my principal more information about the specific topics I was researching and kept her updated with my findings, she would have taken a stronger interest in my work and the results. She was supportive in allowing me to take paid professional leave one day a month, but once I was finished with my work, she was no longer involved and gave me no recognition for it.”

“Teacher research/reflection must be prioritized--a given, perhaps even a ‘moral obligation’ of teachers. It should be (but never has been for me) connected more to school improvement.”

“Conditions at the school site must be based on collaboration. The school leadership must encourage teachers to experiment and share their results. Equity must be apparent. Risk taking should be encouraged.”

“To make teacher action research a more integral part of teacher's practice rather than an isolated project, the teacher researcher needs to be a part of a school system/school that truly supports the concept of utilizing teacher research as a viable avenue for professional development.”

“Teachers need support and resources from their schools and districts. The support may be in the form of time (sub days or time during the school day) leadership (experienced TR leaders to support groups), and recognition and appreciation for the knowledge that they add to their profession.”

Sharing and Recognition

The need for an audience greater than oneself was noted by several respondents. 9 teacher researchers and 1 who had not participated in research indicated the need for “an opportunity to share the research at least school-wide if not district-wide” and some kind of recognition of the time and effort teachers invested in the work, perhaps “district recognition of work such as a conference and/or opportunity to publish research”. One noted the need for a “common open time to share” while another simply wanted “the opportunity to share to an interested audience!”

Limitations

The social organizational factors in this study were measured by collecting data on teachers’ perceptions of the conditions present in their school during their last teacher research inquiry. This may not be an accurate representation of the actual supports and conditions in the school, but it is a depiction of the teachers’ perceptions of what supports were available to them.

The sample contacted for participation in this study is clearly not generalizable to all teachers. An important caveat is that participants who respond to online surveys are computer users with Internet access; such access and skill suggests a certain attainment of social class, education and resources (Coomber, 1997; Cotton, 2001).

Discussion

The teacher researchers described here are part of a small but strong group of education professionals who have risen to the challenge of owning and expanding on their practice in a reflective manner; their responses offer a glimpse into the life of a teacher researcher. School as a workplace, as Rosenholtz (1989) found, is a social enterprise for those who work there.

These teacher researchers have underscored the need for positive responses for their work from some source, preferably across the district but at minimum schoolwide. The majority indicated the importance of having a group to rely on for encouragement, discussion, and support. Collaboration with other educators was identified as a “must-have” by nearly all of the survey respondents in an open-ended item. Several identified the professional learning community model of professional development and school improvement as a likely source of this support; the interaction of professional learning communities and the systematic reflective practice of teacher research would be a potentially important research topic for the near future.

The significant difference between the groups on the school culture measure was surprising. It would seem that the group that had successfully completed one or more teacher research inquiries would report a more supportive school culture; in fact, the reverse was true, with an effect size that draws attention to the result. A few explanations might be posed to address the result. The low response rate from the second stage of the study (which collected responses from those who had not conducted teacher research) may have resulted in a self-selection of teachers who perceive positive school cultures, while those whose workplaces are characterized by more negative cultures simply chose not to respond. Also, Stage 2 of this survey was a random sample from across the state; many of these teachers identified may not actually check their email because there is no expectation that teachers do so.

To accept the result (despite the response rate), on the other hand, leads to another set of possible explanations. The teacher researcher group has engaged in extensive reflection on their practice, going beyond that of the typical preK-12 educator. Perhaps this reflection leads them to a more critically honest response of the school as workplace. The perception that a school rewards hard work, ongoing learning, and teachers' critical reflection on their practice may change after one has engaged in all three and then seen little or no reward. I have had teacher researchers compare their inquiries to "their children," carefully nurtured for long periods of time until a result was apparent in their classroom practices; to receive little school or district recognition of this intensive work could be analogous to the deflated feeling one has when facing indifferent strangers with a new infant. It would be logical for an unrecognized teacher researcher to report lower scores on those items related to reward for their work, whereas prior to the inquiry their scores might have aligned more closely with those who have not yet conducted teacher research. Similar logic might be applied to the difference in the results for school supports available (access to professional release time, teacher workdays, school-university partnership programs, and school- or district-based teacher research support groups).

The concern about self-selection in Stage 2 respondents applies to the results regarding access to material resources as well. With nearly 3 in 4 not responding, there could be a logical pattern of those teachers with convenient access to these resources more likely to respond to an email survey and those without access simply not reading the survey invitation. Although this is not enough reason to disregard these results (for which there is no other current research), it is a reason to seek multiple means of contact in the next stage. It is clear that a larger sample with a

higher response rate is necessary to explore this issue; more open-ended questions to explore the identified themes should also be included.

It is interesting to note that 12 of 15 teachers (80%) who had not conducted teacher research indicated that they planned to do so in the future. This interest will not be sustainable, however, without significant change in administrative leadership and formal as well as informal support systems. A positive school culture alone is not enough impetus to engage in the classroom inquiry process; there must also be explicit support for the process voiced by instructional leaders. Information about the teacher research process and support for those who are interested in beginning and continuing this reflective practice must also be available. The challenge to school leaders is to embrace the concept of formalized reflective practice and embed the concept into the current professional development models in their schools; with these supports in place, teacher research may become a higher-profile method of reflective practice and school improvement.

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